



## Postgraduate Diploma Hospital Pharmacology Management

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/pk/pharmacy/postgraduate-diploma/postgraduate-diploma-hospital-pharmacology-management

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Efficient management of state-of-the-art drugs and therapies in the hospital setting must be performed by the best qualified personnel. Pharmacists who are in charge of these tasks in secondary and tertiary care health centers must be up to date with the most excellent drug protocols and recommendations. On the other hand, they also have to specialize in the interventions of polytrauma patients and the management of pathologies in the Genitourinary, Obstetric and Gynecological System. All these topics have been collected by TECH in a very complete 100% online program. The program, designed for each graduate to develop competencies in a fast and flexible way, is supported by the disruptive Relearningmethodology and a teaching staff made up of the best experts.



### tech 06 | Introduction

The incorporation of new technologies and information in the field of Hospital Pharmacology Management has completely transformed the current panorama of this sector. The use of more sophisticated and accurate tools allows decision making based on economic analysis, improved drug rotation and automation of drug preparation and dispensing in these healthcare environments.

In this scenario, it is essential for the pharmaceutical professional to be aware of the advances in planning and work methodology, in departmental organization, as well as in the systems used for inventory management and stock control. This is the line of thought of this 6-month Postgraduate Diploma, which has a syllabus prepared by an excellent teaching team specialized in this area.

It is an intensive program that will also address pharmacology focused on the following areas: Genitourinary, Obstetrics and Gynecology Systems. In turn, it will delve into the toxicokinetics generated by some drugs, how to treat them or prevent their adverse effects in the context of hospital care.

In order to consolidate these state-of-the-art theoretical and practical skills in students, TECH uses an exclusive and original methodology. Thus, the Relearning method is used to facilitate the assimilation of complex concepts through gradual and structured repetition. Moreover, this program is not subject to hermetic schedules or rigid evaluation chronograms. Thus, each graduate will be able to customize their access to the contents, depending on the time or place that best suits them.

This **Postgraduate Diploma in Hospital Pharmacology Management** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of practical cases presented by experts in Pharmacy, Hospital Management, among others
- Graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



With this program you will be up to date with the most current information technologies used in ambulatory pharmaceutical care"

### Introduction | 07 tech



A rigorous syllabus with updated theoretical and practical materials and complementary multimedia resources such as interactive summaries and explanatory videos"

The program includes in its teaching staff professionals from the sector who pour into this training the experience of their work, in addition to recognized specialists from reference societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professionals with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby professionals must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.

You have before you a comprehensive program in project management and strategic planning in Hospital Pharmacy.

You will be able to update your skills thanks to an intensive university program that brings together the most advanced advances in Hospital Pharmacology Management in an exceptional way.







### tech 10 | Objectives



### **General Objectives**

- Identify management of a wide variety of clinical situations, using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices, prehospital providers)
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data
- Summarize strategies for the procurement, preparation, and administration of time-sensitive therapies
- Evaluate the applicability and limitations of published data and reports to patient care
- Modify the treatment plan based on monitoring the patient's response to initial therapy





### **Specific Objectives**

#### Module 1. Hospital Pharmacology Management

- Deepen the organization and efficient management of the Hospital Pharmacy Department, including the assignment of roles and responsibilities of the pharmaceutical staff
- Delve into hospital information systems, electronic medical records and automation in the preparation and dispensing of medications
- Inquire into the concepts of pharmacoeconomics and health technology assessment to analyze the efficiency and equity in the use of resources in the health care setting
- Implement and evaluate protocols for the use of medications in the hospital, ensuring their safe and efficient use and their integration with the hospital information system

#### Module 2. Pharmacology of the surgical and polytraumatized patient

- Master the pharmacological and general management of traumatic brain injury, triage procedures, scales and severity classification
- Delve into the reversal of antithrombotic drugs: coagulopathy, severity of bleeding, resuscitation, monitoring of coagulopathy, reversal agents, antifibrinolytics
- Delineate the pharmacological options for the management of Acute Pain, Spinal Shock, Neurogenic Shock and Hypovolemic Shock
- Assess the different sedative agents that promote moderate sedation, their levels and recommendations

#### Module 3. Pharmacology of the Genitourinary, Obstetric and Gynecologic System

- Identify the microorganisms related to Sexual Aggression, recommended tests, empirical treatment, emergency contraception, vaccination and HIV prophylaxis
- Manage the precise pharmacology for sexually transmitted diseases such as Chlamydia, Gonorrhea, Syphilis, as well as their incidence
- Investigate the management of Gestational Hypertension from its pathophysiology, risk assessment, clinical presentation and pharmacological treatment
- Differentiate the pathophysiology, classification, treatment of cystitis and pharmacotherapeutic follow-up after culture



An intensive and updated syllabus where you will reach all your academic goals with speed, flexibility and efficiency"





### tech 14 | Course Management

#### Management



#### Mr. Ramos Rodríguez, Javier

- Pharmacist at Hospital Corporación Sanitaria Parc Taulí, Sabadell, Spain
- Coordinating member of the working group of pharmacists specializing in the Emergency Department (RedFaster)
- Pharmacist specializing in Hospital Pharmacy at Hospital Mútua de Terrassa
- Pharmacist specializing in Hospital Pharmacy at Consorci Sanitari Integral
- Resident Pharmacist at Servicio Canario de la Salud (Canary Health Service)
- Assistant Pharmacist in Pharmacy María Concepción Gutiérrez
- Assistant Pharmacist in Pharmacy Marina López González
- Master in Pharmacotherapeutic Follow-up of HIV/AIDS patients by the University of Granada

#### **Professors**

#### D. Amor García, Miguel Ángel

- Hospital pharmacist at Infanta Cristina University Hospital
- Coordinator of the FarMIC Group of the Spanish Society of Hospital Pharmacy
- Member of the National Commission of Hospital Pharmacy, Ministry of Health of Spain
- Resident pharmacist at Gregorio Marañón University Hospital
- Hospital pharmacist at Salamanca Clinical Hospital
- Master's Degree in Medical Science Liaison at CESIF
- Degree in Pharmacy from the University of Salamanca

#### Mr. Wood, Eduardo

- Head of Hospital Pharmacy Service at ICOT Group
- Specialist in Clinical Pathology at Life Length
- Specialist in Clinical Analysis and assistant pharmacist at Pérez del Toro y Gálvez CB Laboratory Pharmacy
- Clinical Analysis Specialist in Laboratorio González Santiago SL
- Clinical Laboratory Specialist at Eurofins Megalab
- ◆ Specialist in Clinical Analysis at Dr. Negrin University Hospital
- Degree in Pharmacy from the Complutense University of Madrid







### tech 18 | Structure and Content

#### Module 1. Hospital Pharmacology Management

- 1.1. Human Resources Management in the Hospital Pharmacy Department
  - 1.1.1. Organization of the Hospital Pharmacy Department
  - 1.1.2. Roles of the pharmaceutical staff
  - 1.1.3. Performance evaluation and professional development of the pharmaceutical staff
  - 1.1.4. Design of education and training programs for pharmaceutical personnel
- 1.2. Information technologies applied to Hospital Pharmacy management
  - 1.2.1. Hospital information systems and their integration with the Pharmacy department
  - 1.2.2. Electronic medical records and pharmacotherapeutic registries in the hospital environment
  - 1.2.3. Automation and robotics in the preparation and dispensing of medications
  - 1.2.4. Inventory management and stock control systems in the pharmacy department
- 1.3. Inventory management and pharmaceutical logistics in hospitals
  - 1.3.1. Organization and structure of the pharmacy department in the context of hospital logistics
  - 1.3.2. Selection and evaluation of pharmaceutical suppliers
  - 1.3.3. Receipt, storage and distribution of drugs and pharmaceuticals
  - 1.3.4. Rotation and expiration of inventory in the hospital environment
- 1.4. Pharmacoeconomics and health technology assessment
  - 1.4.1. Methods and techniques of health economic analysis
  - 1.4.2. Analysis of efficiency and equity in the use of resources in the health sector
  - 1.4.3. Assessment of health outcomes and health-related quality of life
  - 1.4.4. Use of health and economic indicators in clinical and administrative decision making
- 1.5. Development and monitoring of protocols for the use of drugs in hospitals
  - 1.5.1. The role of the hospital pharmacist in the development of protocols
  - 1.5.2. Design and development of protocols for the safe and efficient use of medications
  - 1.5.3. Implementation and dissemination of protocols in the health care team
  - 1.5.4. Integration of medication use protocols with the hospital information system
- 1.6. Pharmacovigilance and patient safety in the administration of medications
  - 1.6.1. Pharmacovigilance systems and databases in the hospital setting
  - 1.6.2. Reporting and recording of adverse drug-related events
  - 1.6.3. Methods for the early detection of adverse drug reactions
  - 1.6.4. Active and passive pharmacovigilance in hospital pharmacy





### Structure and Content | 19 tech

- 1.7. Ambulatory clinical pharmacy and outpatient care
  - 1.7.1. Models of outpatient pharmaceutical care in the hospital setting
  - 1.7.2. Pharmaceutical evaluation of outpatients: collection and analysis of clinical and pharmacotherapeutic data
  - 1.7.3. Elaboration of pharmacological treatment plans and outpatient monitoring
  - 1.7.4. Use of information technologies in outpatient pharmaceutical care
- 1.8. Quality Management and Continuous Improvement in Hospital Pharmacy
  - 1.8.1. quality standards applicable to hospital pharmacy
  - 1.8.2. Implement of quality management system
  - 1.8.3. Evaluation and improvement of processes in the hospital pharmacy area
  - 1.8.4. Internal and external audits in hospital pharmacy quality management
- 1.9. Integration of hospital pharmacy in multidisciplinary health teams
  - 1.9.1. Models of interprofessional and multidisciplinary care in the hospital setting
  - 1.9.2. Roles and responsibilities of the pharmacist in multidisciplinary health teams
  - 1.9.3. Effective communication and collaboration among health care professionals in the hospital setting
  - 1.9.4. Clinical cases and case discussion in multidisciplinary teams
- 1.10. Project Management and Strategic Planning in Hospital Pharmacy
  - 1.10.1. Processes and methodologies for project management in the field of hospital pharmacy
  - 1.10.2. Identification and formulation of pharmaceutical projects in hospital pharmacy
  - 1.10.3. Planning and organization of resources for the implementation of projects
  - 1.10.4. Implementation and follow-up of pharmaceutical projects

#### Module 2. Pharmacology of the surgical and polytraumatized patient

- 2.1. Triage
  - 2.1.1. Triage in emergency and disaster situations
  - 2.1.2. Triage systems used in the hospital setting and their characteristics
  - 2.1.3. Role of the pharmacist in the triage process and emergency care
  - 2.1.4. Pharmaceutical triage protocols in different clinical scenarios
- 2.2. Resuscitation in the polytraumatized patient (PPT)
  - 2.2.1. Hospital pharmacy in the PPT resuscitation team
  - 2.2.2. Pharmacology of resuscitation: drugs and therapies used in PPT
  - 2.2.3. Fluid therapy in the polytraumatized patient: types of solutions and considerations
  - 2.2.4. Analgesia and sedation in the polytraumatized patient

### tech 20 | Structure and Content

2.3. Cranioencephalic T	rauma (	(CET)	
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- 2.3.1. Classification and Severity of CET
- 2.3.2. Pain management and sedation in patients with CET
- 2.3.3. Treatment of Intracranial Hypertension
- 2.3.4. Use of neuroprotective agents in CET

#### 2.4. Reversal of anticoagulants

- 2.4.1. Importance of anticoagulant reversal in specific clinical situations
- 2.4.2. Risk-benefit assessment in anticoagulant reversal
- 2.4.3. Reversal of unfractionated heparin (UFH) and low-molecular-weight heparin (LMWH)
- 2.4.4. Antidotes and reversal agents for direct oral anticoagulants (OACDs)

#### 2.5. Acute Pain Management

- 2.5.1. Classification and scales for the evaluation of acute pain
- 2.5.2. Principles and guidelines of pharmacological management of acute pain
- 2.5.3. Multimodal Analgesia
- 2.5.4. Intravenous, oral and transdermal analgesia

#### 2.6. Spinal shock

- 2.6.1. Evaluation and classification of spinal shock
- 2.6.2. Medications to stabilize blood pressure in spinal cord shock
- 2.6.3. Pain Management in Patients with Spinal shock
- 2.6.4. Neuroprotective agents in spinal shock

#### 2.7. Hypovolemic Shock

- 2.7.1. Evaluation and classification of Hypovolemic Shock
- 2.7.2. Fluid therapy and volume replacement in hypovolemic shock
- 2.7.3. Types of solutions and electrolytes used in volume replacement
- 2.7.4. Use of vasoactive agents in the management of hypovolemic shock

#### 2.8. Penetrating Trauma

- 2.8.1. Evaluation and classification of patients with penetrating trauma
- 2.8.2. Initial management and pharmacological stabilization of the trauma patient
- 2.8.3. Use of hemostatic agents and pharmacologic hemostasis
- 2.8.4. Antibiotherapy in penetrating trauma patients

#### 2.9. Open Fractures

- 2.9.1. Initial evaluation and emergency management of patients with open fractures
- 2.9.2. Use of analgesia and sedation in patients with open fractures
- 2.9.3. Adjuvant therapies in the acceleration of bone healing
- 2.9.4. Use of analgesics and anti-inflammatory drugs in the management of pain in open fractures

#### 2.10. Moderate sedation

- 2.10.1. Indications and contraindications of moderate sedation
- 2.10.2. Evaluation and selection of the appropriate level of sedation for each patient
- 2.10.3. Management of anxiety and pain in procedures with moderate sedation
- 2.10.4. Monitoring and patient safety during moderate sedation

#### Module 3. Pharmacology of the Genitourinary, Obstetric and Gynecologic System

#### 3.1. Sexual Assault

- 3.1.1. Medical and pharmacological considerations in the immediate care of victims of sexual assault
- 3.1.2. Pharmacotherapy for the prevention and treatment of sexually transmitted infections (STIs)
- 3.1.3. Post-exposure prophylaxis (PEP) for HIV and other STIs in victims of sexual assault
- 3.1.4. Pharmacologic therapy to prevent and treat physical injuries and psychological complications

#### 3.2. Sexually Transmitted Diseases

- 3.2.1. Epidemiology of sexually transmitted diseases
- 3.2.2. Prevention and promotion of sexual health in at-risk populations
- 3.2.3. Pharmacotherapy for the treatment of sexually transmitted infections (STIs)
- 3.2.4. Post-exposure prophylaxis (PEP) for HIV and other STIs

#### 3.3. Gestational hypertension

- 3.3.1. Classification and diagnosis of gestational hypertension
- 3.3.2. Pharmacology of drugs used in the management of gestational hypertension
- 3.3.3. Monitoring and control of blood pressure in pregnant women
- 3.3.4. Pharmacological management of mild and severe gestational hypertension

### Structure and Content | 21 tech

- 3.4. Venous thromboembolism
  - 3.4.1. Classification and diagnosis of venous thromboembolism
  - 3.4.2. Pharmacology of anticoagulants used in the treatment of VTE
  - 3.4.3. Use of parenteral and oral anticoagulants in the management of VTE
  - 3.4.4. VTE prophylaxis in hospitalized and surgical patients
- 3.5. Acute uncomplicated cystitis
  - 3.5.1. Classification and diagnosis of Acute Cystitis
  - 3.5.2. Pharmacology of antibiotics used in the treatment of Acute Cystitis
  - 3.5.3. Use of analgesic drugs in pain relief in acute cystitis
  - 3.5.4. Alternatives to antibiotics in the treatment of Acute Cystitis
- 3.6. Urinary Tract Infections
  - 3.6.1. Classification and diagnosis of Urinary Tract Infection
  - 3.6.2. Pharmacology of antibiotics used in the treatment of the ITU
  - 3.6.3. Use of analgesic drugs in pain relief in the ITU
  - 3.6.4. Treatment of complicated and recurrent urinary tract infections
- 3.7. Principles of pharmacokinetics and pharmacodynamics applied to gynecologic drug medications
  - 3.7.1. Principles of absorption
  - 3.7.2. Principles of metabolism
  - 3.7.3. Principles of excretion
  - 3.7.4. Relevant drug interactions in the area of Gynecology
- 3.8. Pharmacology of drugs used in the Genitourinary System
  - 3.8.1. Drugs used in the treatment of urinary tract infections (UTI)
  - 3.8.2. Drugs used in the treatment of erectile dysfunction and other sexual disorders
  - 3.8.3. Pharmacotherapy in the management of benign prostatic hyperplasia (BPH)
  - 3.8.4. Medications for the management of renal disorders, such as nephritis and chronic renal failure

- 3.9. Pharmacology of the obstetric system
  - 3.9.1. Pharmacology of prenatal supplements and micronutrients used in pregnancy
  - 3.9.2. Drugs used in the treatment of nausea and vomiting of pregnancy
  - 3.9.3. Drugs for the management of hypertensive disorders in pregnancy (preeclampsia and eclampsia)
  - 3.9.4. Use of drugs in the prevention and treatment of infections during pregnancy
- 3.10. Pathophysiology of menstrual disorders
  - 3.10.1. Menstrual bleeding disorders: menorrhagia, metrorrhagia, and hypomenorrhea
  - 3.10.2. Premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD)
  - 3.10.3. Endometriosis: pathologic mechanisms and clinical manifestations
  - 3.10.4. Polycystic ovary syndrome (PCOS): characteristics and consequences



In this Postgraduate Diploma in Hospital Pharmacology Management you will update your theoretical and practical knowledge in a dynamic way"

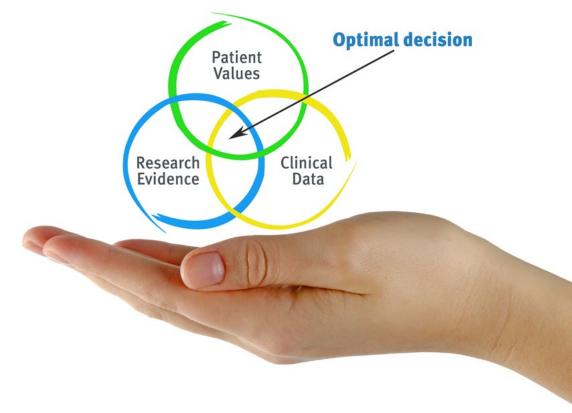


### tech 24 | Methodology

#### At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, attempting to recreate the actual conditions in a pharmacist's professional practice.



Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

#### The effectiveness of the method is justified by four fundamental achievements:

- 1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
- 2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- 4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



### tech 26 | Methodology

### Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

Pharmacists will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



### Methodology | 27 tech

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

### tech 28 | Methodology

This program offers the best educational material, prepared with professionals in mind:



#### **Study Material**

All teaching material is created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### **Video Techniques and Procedures**

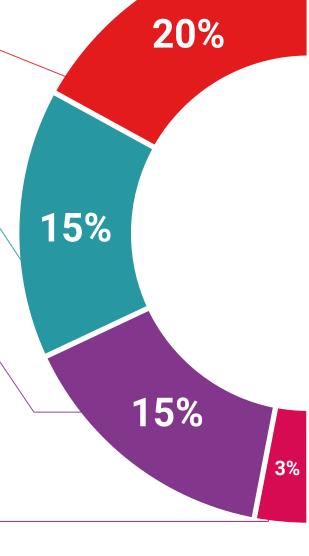
TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.



#### **Interactive Summaries**

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

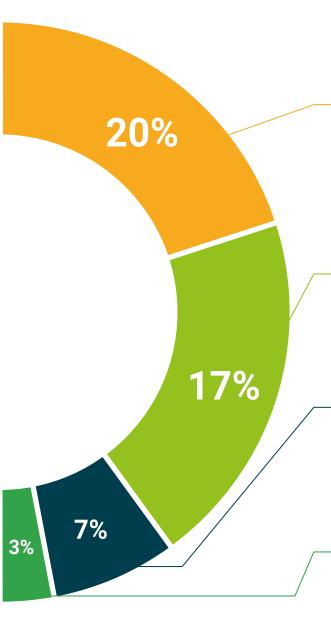
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





#### **Additional Reading**

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.



#### **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### **Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts.

The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.







### tech 32 | Certificate

This **Postgraduate Diploma in Hospital Pharmacology Management** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Hospital Pharmacology Management
Official N° of Hours: **450 h**.



#### POSTGRADUATE DIPLOMA

in

#### Hospital Pharmacology Management

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

nique TECH Code: AFWORD23S techtitute.com/c

<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

technological university Postgraduate Diploma Hospital Pharmacology Management

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» Certificate: TECH Technological University



Hospital Pharmacology Management

